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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/612,688 | 07/02/2003 | Richard D. Breault | C-2765 | 4397 |

7590 01/07/2005
Malcolm J. Chisholm, Jr.
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Lee, MA 01238

EXAMINER

CANTELMO, GREGG

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1745

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,688

Applicant(s)

BREAULT, RICHARD D.

Examiner

Gregg Cantelmo

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/2/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed July 2, 2003 has been placed in the application file and the information referred to therein has been considered as to the merits.

Drawings

2. The drawings received July 2, 2003 are acceptable for examination purposes.

Specification

3. The disclosure is objected to because of the following informalities: the status of the application listed on page 2 should be updated since it has matured into a U.S. patent. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,794,077 (Yi).

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

Art Unit: 1745

under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Yi discloses a passive water management system comprising at least one fuel cell including an anode fuel flow plate 26, oxidant fuel flow plate 40 defined adjacent opposed sides of electrolyte 19, an anode water management flow field 29 defined adjacent the anode fuel flow field 27 including at least one fuel path between a fuel inlet and fuel outlet for directing the fuel to flow adjacent to the electrolyte from the fuel inlet through the fuel path to the fuel outlet; a cooler plate 51 secured in heat exchange relationship with the fuel cell for removing heat from the fuel cell, the cooler plate 51 including at least one coolant path 52 defined between a coolant inlet and coolant outlet for directing a cooling fluid to flow from the coolant inlet through the coolant path to the coolant outlet, wherein a width of the fuel path 27 is about the same as a width of the coolant path 52 (Fig. 1) where the paths are closest to each other and the fuel path 27 substantially overlies the coolant path 52 extending between the inlets and outlets to minimize temperature differential between the fuel flowing through the fuel path (Figs. 1 and 6 as applied to claim 1).

The system further comprises plural fuel paths 29 extending between the inlet and outlet of about the same width and substantially overlying a corresponding number of coolant paths (Figs. 1 and 6 as applied to claim 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yi in view of U.S. Patent No. 6,322,915 (Collins).

The teachings of claim 1 have been discussed above and are incorporated herein.

The difference between claim 3 and Yi is that Yi does not teach of the coolant loop and pressure control means.

Collins discloses providing a coolant loop 42 and pressure control means 44 to the coolant system in a fuel cell. (Fig. 1).

The motivation for using the coolant loop and coolant pressure control as taught by Collins is that it provides improved humidification control of the fuel cell system.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of Yi by using the coolant loop and coolant pressure control as taught by Collins since it would have provided improved humidification control of the fuel cell system.

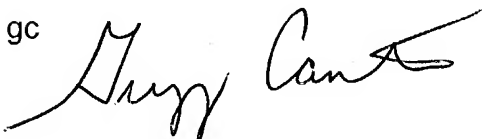
Conclusion

Art Unit: 1745

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is (571) 272-1283. The examiner can normally be reached on Monday to Thursday from 9 a.m. to 6 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. FAXES received after 4 p.m. will not be processed until the following business day. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregg Cantelmo
Primary Examiner
Art Unit 1745

gc



January 5, 2005